

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: March 4, 1992  
Date Submitted: February 24, 1992  
Project: 7201, Metro Self Monitor, PO #M23638

**RESULTS OF ANALYSES OF THE WATER SAMPLE  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
METHOD 6010  
Results Reported as mg/L (ppm)**

|                 |               |
|-----------------|---------------|
| <u>Sample #</u> | <u>M23638</u> |
| <u>Analyte:</u> |               |
| Arsenic         | 0.2           |
| Cadmium         | <0.05         |
| Chromium        | 1.4           |
| Lead            | <0.05         |
| Silver          | <0.05         |
| Copper          | 0.5           |
| Nickel          | 1.6           |
| Zinc            | 1.5           |

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: March 4, 1992  
Date Submitted: February 24, 1992  
Project: 7201, Metro Self Monitor, PO #M23638

**RESULTS OF ANALYSES OF THE WATER SAMPLE  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
METHOD 6010  
Results Reported as mg/L (ppm)  
Quality Assurance**

| <u>Sample #</u> | Method<br><u>Blank</u> | M23638<br>( <u>Duplicate</u> ) |
|-----------------|------------------------|--------------------------------|
| <u>Analyte:</u> |                        |                                |
| Arsenic         | <0.1                   | <0.1                           |
| Cadmium         | <0.05                  | <0.05                          |
| Chromium        | <0.05                  | 1.4                            |
| Lead            | <0.05                  | <0.05                          |
| Silver          | <0.05                  | <0.05                          |
| Copper          | <0.05                  | 0.5                            |
| Nickel          | <0.05                  | 1.6                            |
| Zinc            | <0.05                  | 1.5                            |

**FRIEDMAN & BRUYA, INC.**

**ENVIRONMENTAL CHEMISTS**

Date of Report: March 4, 1992  
Date Submitted: February 24, 1992  
Project: 7201, Metro Self Monitor, PO #M23638

**RESULTS OF ANALYSES OF THE WATER SAMPLE  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
METHOD 6010  
Results Reported as % Recovery  
Quality Assurance**

| <u>Sample #</u> | M23638<br><u>Matrix Spike</u><br>% Recovery | M23638<br><u>Matrix Spike Duplicate</u><br>% Recovery | <u>Spike<br/>Level</u> |
|-----------------|---|---|------------------------|
| <u>Analyte:</u> |   |   |                        |
| Arsenic         | 96%   | 96%   | 10                     |
| Cadmium         | 100%  | 100%  | 5                      |
| Chromium        | 100%  | 100%  | 5                      |
| Lead            | 98%   | 99%   | 10                     |
| Silver          | 37% <sup>a</sup>                            | 41 <sup>a</sup>                                       | 2                      |
| Copper          | 97%   | 98%   | 5                      |
| Nickel          | 99%   | 100%  | 10                     |
| Zinc            | 92%   | 93%   | 5                      |

**a** - No corrective action is required for low silver recoveries.

## SAMPLE CHAIN OF CUSTODY

Send Report To: ALASKAN COPPER WORKS Contact: GREG SIEPER  
Company: P.O. BOX 3546  
Address: SEATTLE, WA. 98124  
City, State, Zip: 206-223-5800 Date: 2/24/92  
Phone #

| SITE NO. | PROJECT NAME | PURCHASE ORDER # |
|----------|--------------|------------------|
|----------|--------------|------------------|

7201

METRO SELF-MONITOR

W23638

SAMPLERS (signature)

### PROJECT LOCATION

Gregory A. Soper

3200 C<sup>th</sup> AVE. SOUTH

REMARKS

**SAMPLE DISPOSAL INFORM.**

- ☐ Dispose after 30 days  
☒ Return Samples  
☐ Call for Instructions

**SAMPLE #**

Date/Time  
Sampled

Type of Sample

# of  
Jars

Lab  
Sample #

### Analyses Requested

W23638

2/24/92

WATER.

1

27287

Cr, Cu, Ni, Zn

Ag, As, Cd, Pb also

**SIGNATURE**

PRINT NAME \_\_\_\_\_

COMPANY

Date \_\_\_\_\_

Time

Relinquished by:

Area Speed

Alison Cross-Walker

2/27

Received by:

M. A. DANFORS

FRIEDMAN E' BRUNA

2/24/92

2:55

Relinquished by:

Received by:

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Andrew John Friedman  
James E. Bruya, Ph.D.  
(206) 285-8282

3008-B 16th Avenue West  
Seattle, WA 98119  
FAX: (206) 283-5044

March 4, 1992

Greg Speer, Project Leader  
Alaskan Copper  
628 South Hanford  
Seattle, WA 98134

Dear Mr. Speer:

Enclosed are the results of the analyses of the sample submitted on February 24, 1992 from Project 7201, Metro Self Monitor, PO #M23638.

We appreciate this opportunity to be of service to you on this project. If you have any questions regarding this material, or if you just want to discuss any aspect of your projects, please do not hesitate to contact me.

Sincerely,



Mark Z Perin, Chemist

MZP/dp

Enclosures

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: March 4, 1992  
Date Submitted: February 24, 1992  
Project: 7201, Metro Self Monitor, PO #M23638

RESULTS OF ANALYSES OF THE WATER SAMPLE  
FOR TOTAL METALS BY  
INDUCTIVELY COUPLED PLASMA (ICP)  
METHOD 6010  
Results Reported as mg/L (ppm)

|                 |               |
|-----------------|---------------|
| <u>Sample #</u> | <u>M23638</u> |
| <u>Analyte:</u> |               |
| Arsenic         | 0.2           |
| Cadmium         | <0.05         |
| Chromium        | 1.4           |
| Lead            | <0.05         |
| Silver          | <0.05         |
| Copper          | 0.5           |
| Nickel          | 1.6           |
| Zinc            | 1.5           |